ON THE UNIFORMITY OF SYMBOLS USED IN PUBLICATIONS ON ACTINOMETRY

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The attention of the present author was at first drawn to this matter by Doctor Dobson, who pointed out in a letter the confusion existing as regards symbols, the same symbol being sometimes used even in the same paper for indicating different quantities.

In fact a certain uniformity seems here desirable and also possible to obtain.

As a preliminary step before the matter can be discussed by an international body, I have consulted a number of scientists working in the field of actinometry, and especially I have asked for the opinions of the Meteorological Institute at Potsdam through Doctor Süring, and also for those of Doctor Kimball, formerly president of the radiation commission of the I. G. G. U.

Before giving his own view on the matter, Doctor Kimball refers to the fact that opinions have been expressed against "trying to standardize symbols for actinometric factors, for the reason that we can not get letters that are not already used to indicate factors in some branch of the physical sciences." "Each author should state specifically the meaning of the symbols he employs."

As regards the desirability of stating in each separate case the meaning of the symbols employed, I think there is no diversity of opinion. A certain uniformity will not make such a statement superfluous. But on the other hand I can not attach great weight to the objection that all symbols are already used in some other branch of physical sciences. As natural as it seems that the same author ought to try to use in his various papers the same symbols for the same factors, as reasonable seems also the demand that we ought to aim at a certain uniformity also among various authors.

It is evident that a proposal as regards uniformity of symbols ought not to aim at an alteration of the symbols which are already in use in periodical publications like the Annals of the Astrophysical Observatory, for instance, where a certain uniformity is already created. But the proposal aims at trying to introduce uniformity in all these cases of separate papers and articles, where the lack of uniformity arises simply from the lack of cooperation and accepted rules.

The matter may be regarded as one of inferior importance. And yet it is of considerable weight, just for making ourselves rid of small obstacles in order to have opportunity to concentrate upon the large ones.

As regards some symbols the opinions have gone in various directions. I do not propose to discuss them here. In the following cases however, the opinions seem in general to agree:

1. Intensity of sun radiation $= I$.
   (*a*) Solar constant $= I_o$.
   (*b*) Sun radiation within certain spectral intervals: I_r, I_g, $I_{\lambda=540}$, etc.
2. Relative air mass (zenith air mass taken as unit) $= m$.
3. True air mass $= M$; $\left(M = m\frac{b}{760}\right)$ where b is the barometric pressure at the place of observation.
4. (*a*) h = height of the sun.
   (*b*) z = zenith distance of the sun.
5. R = effective radiation of long-wave length (generally measured as nocturnal radiation).
6. D = Diffused radiation from the sky.
7. G = atmospheric long-wave radiation.

$$G = \sigma T^4 - R$$

where σ is the constant of Stefan-Boltzmann and T is the absolute temperature.

For the cases where no conflict arises with indications generally accepted for other physical factors, I therefore propose that these symbols be generally used. Especially I have in mind the publications of the observations during the International Polar Year 1932–33.

RETIREMENT OF H. A. HUNT, GOVERNMENT METEOROLOGIST OF AUSTRALIA

A circular, recently received from Melbourne, announces the retirement on February 6, 1931, of H. A. Hunt, Commonwealth meteorologist for Australia.

Mr. Hunt was born in London in 1866. In 1884 he joined the Sydney Observatory staff He was the inventor of the cube pressure anemometer (1902). In 1906 he was made Commonwealth meteorologist, which position he held up to his retirement. Among his published works may be mentioned Types of Australia Weather (1893), and in the succeeding years numerous papers on the climate of Australia.

Mr. Hunt was succeeded by William Shand Watt.—*H. L.*